

REMARKS

Applicants' remarks on pages 8-14 of the Amendment and Request for Reconsideration filed January 13, 2006 are incorporated herein by reference in their entirety. Reconsideration of the claimed invention is respectfully requested in light of the above-shown amendments and the following additional reasons.

Rejection under 35 U.S.C. § 102(b)/103(a)

The rejection of Claims 5-17 under 35 U.S.C. § 102(b), or in the alternative under 35 U.S.C. § 103(a), over the disclosure of U.S. Patent Application No. 2002/0098407 (US '407), as evidenced by Kerr et al. ("New Polyelectrolyte Materials for High Temperature Fuel Cells") is traversed and obviated by amendment.

Claims 5 and 9 have been amended to recite a method for manufacturing a membrane electrode assembly for a solid polymer type fuel cell having a porous gas diffusion layer that comprises carbon cloth or carbon paper soaked in a dispersion comprising electrically conductive particles and water repellant particles.

In particular, as suggested by the Examiner in present Final Office Action at page 2, paragraph 5, the claims have been amended to remove the language "dispersed throughout the layer." The claims have also been amended to recite that the carbon cloth or carbon paper is "soaked" in a dispersion, which is supported by and commensurate with present specification at page 5, lines 1-10. Applicants submit that the added language sufficiently clarifies that the electrically conductive particles and water repellant particles are present throughout the layer. (See also THE AMERICAN HERITAGE COLLEGE DICTIONARY (2002), page 1313, which generally defines the verb "soak" as, *inter alia*, "thoroughly wet or saturated by"). (Emphasis added). A copy of the dictionary reference is enclosed herewith for the Examiner's convenience.

In contrast, the US '407 reference does not describe a process that includes the soaking (i.e., thorough saturation) of any particles in the carbon layer whatsoever. Therefore, the reference does not anticipate the claims. Moreover, the reference implies that the gas diffusion properties are reduced if the electrically conductive particles and water repellant particles are present throughout the carbon layer. (See MPEP § 2141.02, explaining that “prior art must be considered in its entirety, including disclosures that teach away from the claims”; and MPEP § 2143, explaining that “proposed modifications cannot render the prior art unsatisfactory for its intended purpose”). In particular, the reference recites at paragraphs [0022] and [0023]:

with respect to the carbon layer made of a fluororesin and carbon black, to be formed on the porous carbon substrate, its components preferably infiltrate into pore portions of the porous carbon substrate to some extent . . .

[however] . . . if the components of the above carbon layer infiltrate in a depth exceeding 50 μm from the surface of the porous carbon substrate in a thickness direction, since the carbon layer has poor gas diffusion properties, there is fear that the gas diffusion properties of the porous carbon substrate in a plane direction may significantly decrease. In view of the gas diffusion properties, the depth of the infiltration portions of the components of the carbon layer is preferably shallow regardless of the thickness of the porous carbon substrate . . .

(Emphasis added).

In light of the above-disclosure of the reference, there is clearly no intention to include the presence of conductive particles and water repellant particles throughout the carbon layer. Further, there would be no desirability to modify the reference in the presently claimed manner, since such a modification would render the layer unsatisfactory for its intended purpose. Therefore, the present claims are not obvious in view of the reference.

Applicants note that the Examiner asserts in the present Final Office Action at page 7, lines 4-7, that Applicants' previous argument that “Applicants do not impregnate the intermediate lamination layer body 1 with a solution containing the solvent-soluble fluorine-

containing polymer having no ion exchange group immediately before the heat treatment of the intermediate lamination body 1” is not commensurate in scope with the claims. However, Applicants point out that neither the present claims nor the present specification recite or indicate whatsoever the above-mentioned impregnation. Therefore, Applicants’ argument is entirely commensurate in scope with the claimed invention, which should be read in light of the disclosure of the present specification.

Accordingly, withdrawal of the rejection is requested.

Rejection under 35 U.S.C. § 112, First and Second Paragraphs

The rejection of Claims 5-17 under 35 U.S.C. § 112, first and second paragraphs is traversed and obviated by amendment.

As shown and discussed above, the claims 5 and 9 have been amended to remove the phrase “dispersed throughout the layer.” The claims have also been amended to recite that the carbon cloth or carbon paper is “soaked” in a dispersion, which is supported by and commensurate with present specification at page 5, lines 1-10.

Regarding claim 14, the claim has been amended to remove the phrase “at least about” to make the phrase more commensurate in scope with the disclosure. However, the recitation of “33 wt. %” has not been removed, since the wt. % can be calculated from the disclosure at page 4, line 33 through page 5, line 4. In particular, the definiteness requirement of 35 U.S.C. § 112, second paragraph “is satisfied when the relevant values [of a component recited in a claim] can be ‘calculated or measured.’” (See generally *Marley Mouldings Ltd. v. Mikron Industries, Inc.*, 417 F.3d 1356, 75 USPQ2d 1954 (Fed. Cir. 2005) (reversing a district court for holding that all of the claims of a patent were invalid for indefiniteness because the means to calculate a percent volume were not specified in the patent)).

Application No. 10/668,159
Reply to Office Action of March 30, 2006

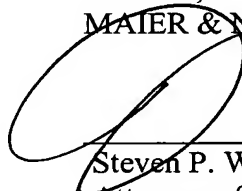
Accordingly, withdrawal of the rejections is requested.

Applicant submits that the application is now in condition for allowance. Early notification of such allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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The American Heritage® College Dictionary

FOURTH EDITION

NOT AVAILABLE



Houghton Mifflin Company
Boston • New York



snowshoe

BEST AVAILABLE COPY

a	pat	oi	boy
ä	pay	ou	out
ä	care	oo	took
ä	father	oo	boot
e	be	ü	cut
e	pe	ür	urge
i	pit	th	thin
i	pie	th	this
ir	pier	hw	which
ö	pot	zh	vision
ö	toe	a	about,
ö	paw	item	

Stress marks:

' (primary);

" (secondary); as in

lexicon (lèk'si-kòn')

one and mounded on the
f of NW Wales rising to a small

mass or bank of snow piled up

Any of several bulbous-leaved
tus, having solitary nodding ap-
prings.

all of snow. 2. The amount of
od or in a specified area
rning made of slats used for
lirting onto walks or roofs.
large expanse of snow.

A single flake of snow. 3. The
ocean herbs of the genus *Phlox*.
shy fruit. 3. See snowberry.
merican wild goose (*Branta*).
reeds in Arctic regions. 4. The
s as an adult.

(-sûm'ar) n. A wood, esp. of
omentosum) native to the
s white flowers.

To deceive, overwhelm, or
tery.

line mammal (*Panthera*) with
aving long thick white fur
a leopard.

itudinal boundary of the
ennially covered, snow-
tuating latitudinal boundary
the extent of snow cover
king) n. Production of
particles for ski slope.

A human figure made of
snowballs on top of a
nô'mäs) A peak, esp. of
al CO.

1. The runoff from a
such runoff occurs
bell' (-mā-) n. A small, round,
tanklike treads, adding
ng on snow. [Slang]

snow/mo-bil'ing n.
n (snô'ôn-thi-moun-
(*Euphorbia marginata*)
ite-margined leaves.

An area of natural
ing the warmer mouth
of the common peach
pod of this plant.

hite ice particle that
t upon hitting a surface.

aprophytic plant that
n North America.

1. A plowlike device
roads and railroad tracks
hich the tips of the
progress. 2. *intr.v.* plowed and
owplow in skiing.

n. An oblong or
rips that is attached to
tr.v. -shoed, -shoe-ing
'sho'er n.

edium-sized hare
a having large, heavily
nd brown in summer.

m') n. A storm with
n. A child's zipper.

nowblower.
a deep tread or stud
surfaces.

1. -wilt') adj. White
er, -i-est 1a. Abundant
o snow. 2. Resembling

—snow/i-ness n.
lium-sized egret (*Hydro-*
d yellow feet, found in

diurnal owl (*Nyctale-*
s having snow-white

bbled, snub-bing, snub-
of. 3. *Nautical* A. To
inning out) by turning
ure (a vessel, for exam-

arette, for example.

Many critics and grammarians have insisted that
followed by *that* in formal writing when used to intro-
giving the reason for or purpose of an action. But
a best regarded as a stylistic preference; in such clauses
is frequently omitted even by reputable writers in formal

contexts, as in *They will double up* (so that) room can be
found for the guests. Both *so* and *so that* are acceptably used to
introduce clauses that state a result or consequence: *The bridge*
was closed, so (or so that) we went back. So is frequently used in
informal speech to string together the elements of a narrative.
This practice should not be carried over into formal writing,
which generally requires that connections be made more explicit.
See Usage Note at *as*.

REGIONAL NOTE New England speakers often use a negative
form such as *so didn't* where other varieties would use the positive
so did, as in *Sophie ate all her strawberries and so didn't Ame-*
lia. Since this usage may confuse a speaker who has not pre-
viously encountered it, it is best avoided in writing.

so² (sô) n. *Music* Variant of *sol*.

SO abbr. 1. seller's option 2. significant other 3. strikeout
so, or So. abbr. 1. south 2. southern

soak (sôk) v. soaked, soak-ing, soaks —tr. 1a. To make thor-
oughly wet or saturated by or as if by placing in liquid. b. To im-
merse in liquid for a period of time. 2. To absorb (liquid, for
example) through or as if through pores or interstices: *soaked up*
the milk. 3. To remove (a stain, for example) by continued im-
mersion: *soaked out the grease spots.* 4. *Informal* To take in or ac-
cept mentally, esp. eagerly and easily: *soaked up the gossip.* 5. *In-*
formal A. To drink (alcoholic liquor), esp. to excess. b. To make

(a person) drunk. 6. *Slang* To overcharge (a person). —intr. 1. To
be immersed until thoroughly saturated. 2. To penetrate or per-
meate; seep: *Let their words soak in.* 3. *Slang* To drink to excess.
4. n. 1a. The act or process of soaking. b. The condition of being
soaked. 2. Liquid for soaking something. 3. *Slang* A drunkard.
[ME *soken* < OE *socian*.] —soak'er n.

soak-age (sô'kij) n. 1a. The process of soaking. b. The condition
of being soaked. 2. The amount of liquid that soaks into,
through, or out of an object.

so-and-so (sô'en-sô') n., pl. -sos 1. An unnamed or unspecified
person or thing. 2. *Informal* A son of a gun.

soap (sôp) n. 1. A cleansing agent made from a mixture of the
sodium salts of various fatty acids of natural oils and fats. 2. A
metallic salt of a fatty acid. 3. *Slang* Money, esp. that which is
used for bribery. 4. A soap opera. —tr.v. soaped, soap-ing,
soaps 1. To treat or cover with or as if with soap. 2a. *Informal*
To soft-soap; cajole. b. *Slang* To bribe. —idiom: no soap *Slang*
1. Not possible or permissible. 2. Unsuccessful; futile. [ME *sape*
< OE *sāpe*.]

soap-bark (sôp'bârk') n. 1. A Chilean evergreen tree (*Quillaja*
sapouaria) of the rose family, having bark used as soap and as
a source of saponin. 2. The bark of this tree.

soap-ber-ry (sôp'ber'é) n. 1a. Any of various chiefly tropical
trees of the genus *Sapindus*, having pulpy fruit that lathers like
soap. b. This fruit. 2. The buffalo berry.

soap-box (sôp'bôks') n. 1. A carton in which soap is packed. 2.
A temporary platform used while making an impromptu or non-
official public speech. —tr.v. boxed, box-ing, box-es *In-*
formal To engage in impromptu or nonofficial public speaking,
often flamboyantly. —idiom: on (one's) soapbox Speaking
one's views passionately or self-importantly.

soap bubble n. 1. A bubble formed from soapy water. 2. Some-
thing beautiful but transient or illusory.

soap opera n. 1. A drama, typically performed as a serial on day-
time television or radio, characterized by stock characters and sit-
uations, sentimentality, and melodrama. 2. A series of experi-
ences characterized by dramatic displays of emotion. [< its orig.
having been sponsored by soap companies.]

soap plant n. 1. Any of several bulbous plants of the genus *Chlo-*
rohalum, esp. *C. pomeridianum*, of western North America, hav-
ing small white flowers and bulbs that produce a soapy lather
when crushed. 2. Any of various plants having parts used as soap.

soap-stone (sôp'stôn') n. A soft metamorphic rock composed
mostly of the mineral talc. [< its smooth soapy feel.]

soap-suds (sôp'sûdz') pl. n. Suds from soapy water.

soap-wort (sôp'wôrt', -wôrt') n. See bouncing bet. [< its yield-
ing a soapy substance when the leaves are bruised.]

soap-y (sôp'pē) adj. -i-er, -i-est 1. Consisting of or containing
soap. 2. Covered with soap. 3. Resembling soap. 4. *Slang* Unctu-
ous; oily. —soap/i-ly adv. —soap/i-ness n.

soar (sôr, sôr) intr.v. soared, soar-ing, soars 1. To rise, fly, or
glide high and with little apparent effort. 2. To climb swiftly or
powerfully. 3. To glide in an aircraft while maintaining altitude.
4. To ascend suddenly above the normal or usual level: *Our spirits*
soared. 4. n. 1. The act of soaring. 2. The altitude or scope at-
tained in soaring. [ME *soren* < OFr. *essorer* < VLat. **exaurāre*;
Lat. *ex-*, *ex-* + Lat. *aura*, air (< Gk. *aure*, breeze; see AURA).]
—soar'er n. —soar/i-ly adv.

soar-ing (sôr'ing, sôr'-) n. The act of gliding while maintaining
altitude, esp. the sport of flying a heavier-than-air craft by using
ascending currents of air.

so-a-ve (sô-ä'vā) n. A dry white Italian table wine. [Ital. < Lat.
suavis, sweet, delightful. See swād- in App.]

sob (sôb) v. sobbed, sob-bing, sobs —intr. 1. To weep aloud
with convulsive gasping; cry uncontrollably. See Sobs at cry. 2. To
make a sound resembling that of loud weeping. —tr. 1. To utter